UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/902,683	07/12/2001	Hamid Ould-Brahim	71493-1004 /jlo	1611

293   7590   03/09/2005

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EXAMINER
ABRISHAMKAR, KAVEH

ART UNIT	PAPER NUMBER
2131	

DATE MAILED: 03/09/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *12 July 2001*.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-21* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-21* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date *7/12/2001*.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____ .

DETAILED ACTION

1.   This action is in response to the communication filed on July 12, 2001. Claims 1

– 21 were originally received for consideration. No preliminary amendments for the

claims were received. Claims 1 – 21 are currently being considered.

Information Disclosure Statement

2.   An initialed and dated copy of the Applicant's IDS form 1449, received on July

12, 2001, is attached to this Office action.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of
> matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the
> conditions and requirements of this title.

3.   Claims 10-18 are rejected under 35 U.S.C. 101 because they are directed solely

to a "data format" containing various data fields. This is non-functional descriptive

material, as neither the data format nor the data fields that it contains perform any

specific data manipulation, or effect any functional change in a computing process. See

MPEP 2016.IV.B.1.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4.   Claims 1 –6, 9-15, 18-21 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Rosen et al. (RFC 2547: "BGP/MPLS VPNs") in view of Fox et al.

(RFC 2685: "Virtual Private Networks Identifier").

Regarding claim 1, Rosen discloses:

A Border Gateway Protocol Speaker (BGP Speaker), in a communication system

which implements at least one network based Virtual Private Network (NB-VPN) across

a backbone, the at least one NB-VPN using an Open System Interconnect (OSI) layer-2

protocol and an OSI layer-3 protocol, at least one NB-VPN using an OSI layer-2

protocol different from an OSI layer-2 protocol used by the backbone or using an OSI

layer-3 protocol different from an OSI layer-3 protocol used by the backbone, the BGP

speaker transmitting an Update message being in conformance with a Border Gateway

Protocol (BGP), and the Update message further including:

"*VPN Reachability information*" (page 9, paragraphs 6-7), wherein a VPN route

has an associated "Target VPN" attribute which gives reachability information;

"*Tunnel Mechanism information*" (page 20, paragraphs 1-4).

Rosen does not explicitly disclose "*Virtual Private Network (VPN) Membership*

information" or a "*VPN Reachability Mode field*."   However, Fox discloses a global

VPN identifier (page 1, paragraphs 7-10). This global VPN identifier identifies the VPN

to which the data belongs (VPN membership information), and allows data to traverse

other VPNs and/or the Internet. Therefore, it would have been obvious to use the VPN

identifier field of Fox because "it is necessary to identify the VPN in which a particular IP

address has meaning" (Fox, page 1, paragraph 5). Further, Fox states that the VPN-ID

has a global format and can be used in various ways depending on the implementation

(page 1, paragraph 7), so it is possible to segment the VPN identifier in any possible

way that is needed by the particular implementation. Therefore, it would have been

obvious to include a "VPN Reachability Mode field" because its just a nomenclature

assigned to a segment of the VPN-ID field, and can be designated as any type of field

as long as it does not exceed the designated update message size.

Claim 2 is rejected as applied above in rejecting claim 1. Furthermore, Rosen

discloses:

The BGP Speaker of claim 1. Rosen does not explicitly state that the VPN

membership information includes "*at least one VPN identification (VPN-ID) field*" and

"*a Number of VPN-IDs field*." However, Fox discloses a global VPN identifier (page 1,

paragraphs 7-10). This global VPN identifier identifies the VPN to which the data

belongs (VPN membership information), and allows data to traverse other VPNs and/or

the Internet. Therefore, it would have been obvious to use the VPN identifier field of

Fox because "it is necessary to identify the VPN in which a particular IP address has

meaning" (Fox, page 1, paragraph 5). Further, Fox states that the VPN-ID has a global

format and can be used in various ways depending on the implementation (page 1,

paragraph 7), so it is possible to segment the VPN identifier in any possible way that is

needed by the particular implementation. Therefore, it would have been obvious to

include a "Number of VPN-IDs field" because its just a nomenclature assigned to a

segment of the VPN-ID field, and can be designated as any type of field as long as it

does not exceed the designated update message size.

Claim 3 is rejected as applied above in rejecting claim 1. Furthermore, Rosen

discloses:

The BGP speaker of claim 1 wherein "*the VPN reachability information*

includes zero or more VPN reachability entries" (page 9, paragraphs 6-7), wherein a

VPN route has an associated "Target VPN" attribute which gives reachability

information.

Claim 4 is rejected as applied above in rejecting claim 3. Furthermore, Rosen

discloses:

The BGP speaker of claim 3. Rosen does not explicitly segment the VPN

Reachability Entry into a "*VPN Reachability Type field*," a "*Length field*," and a "*VPN*

reachability Value Field." However, the VPN Reachability entry is a block of bits,

which can be segmented in anyway deemed appropriate based on the implementation,

as stated by Fox. Therefore, it is obvious to designate names to the sub-fields of the

VPN Reachability entry to contain the VPN reachability type, length and VPN

reachability value fields.

Claim 5 is rejected as applied above in rejecting claim 1. Furthermore, Rosen

discloses:

The BGP Speaker of claim 1 wherein the "*Tunnel Mechanism information*

includes zero or more VPN Tunnel Entries" (page 20, paragraphs 1-4).

Claim 6 is rejected as applied above in rejecting claim 5. Furthermore, Rosen

discloses:

The BGP Speaker of claim 5. Rosen does not explicitly disclose a VPN Tunnel

Entry that includes a "*Tunnel Type field*," a "*Length field*," and a "*Tunnel Value field*."

However, the PN Tunnel Entryis a block of bits, which can be segmented in anyway

deemed appropriate based on the implementation, as stated by Fox. Therefore, it is

obvious to designate names to the sub-fields of the PN Tunnel Entry to contain the

designated tunnel type, length and tunnel value fields.

Claim 9 is rejected as applied above in rejecting claim 1. Furthermore, Rosen

discloses:

The BGP Speaker of claim 1 wherein the Update message further includes "*a*

field indicating a topology of a NB-VPN" (page 10, paragraphs 3-5).

5.   Claims 7-8 and 16-17 are rejected under 35 U.S.C. 103(a) as being unpatentable

over Rosen et al. (RFC 2547: "BGP/MPLS VPNs") in view of Fox et al. (RFC 2685:

"Virtual Private Networks Identifier") in further of view of Bates et al. (RFC 2283:

"Multiprotocol Extensions for BGP-4").

Claim 7 is rejected as applied above in rejecting claim 1. Furthermore, Rosen discloses

the BGP Speaker of claim 1. The Rosen-Fox combination does not explicitly disclose

the Update Message including a *"unique Subsequent Address Family Identifier*

(SAFI) value" indicating that the Update Message includes the "VPN Private Network

(VPN) Membership information", "VPN Reachability information" and "Tunnel

Mechanism information." Bates discloses a *"unique Subsequent Address Family*

Identifier (SAFI) value." Bates discloses a variable length BGP "Network Layer

Reachability Information" field, which can be used to send the VPN information in the

update message (page 2, paragraphs 1-3). Bates further discloses the SAFI field (page

2, paragraph 1-3), which provides additional information about the type of Network

Layer Reachability information carried in the BGP message. Therefore it would have

been obvious that this field could indicate what fields are contained in the message by

specifying a specific value. Therefore it would have been obvious to one of ordinary

skill in that art at the time the invention was made to use the SAFI field of Bates in

conjunction with the Rosen-Fox combination to, as stated by Bates, provide additional

information about the type of Network Layer Reachability information carried in that

attribute so that the message could be processed.

Claim 8 is rejected as applied above in rejecting claim 7. The Rosen-Fox combination

does not explicitly disclose that the "*unique SAFI value is 129*. " Bates disclose that the

unique SAFI value for vendor-specific applications is between 128-255, which contains

the unique value 129. Therefore, it would have been obvious to use the unique SAFI

value of 129 for a vendor-specific application.

6.   Claims 10-18 are claims directed to a "data format" analogous to the BGP

Speaker claims rejected above, and therefore, are rejected using the same reasoning.

7.   Claims 19-21 are claims directed to a "virtual router" analogous to the BGP

speaker claims rejected above, and therefore, are rejected using the same reasoning.

Conclusion

8.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Kaveh Abrishamkar whose telephone number is 571-

272-3786. The examiner can normally be reached on Monday thru Friday 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Ayaz Sheikh can be reached on 571-272-3795. The fax phone number for

the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the

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published applications may be obtained from either Private PAIR or Public PAIR.

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you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free).

KA K.A.
03/05/05

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